

Split

AsAP ship Oct. 25

Work Order ID 91379-1

\*91379\*

October-05-12 11:32:10 AM

Item ID: D4410-041

Accept

\*N9000040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Co-Pilot Collective Head Assembly (205)

Start Date: 10/05/12 Start Qty: 10.00 \*10\*

Required Date: 10/12/12 Req'd Qty: 10.00 \*10\*

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: MJS  
QC:

Date: 12-10-05 Tooling:  
Date: SPC (Y/N):

Run Start \*NR1\*  
Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description
Draw Nbr	Revision Nbr
D4410	B

Set Up/  
Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	--------------	---------------	---------------	------------------	----------------

110 Weld per dwg A/R Aluminum rod Batch: M120854 0.00

\*110\*

Large Fab

Large Fab

Memo 0.00  
WELD D4410-7, D4410-1 & D4410-15 AS PER DWG  
GRIND WELD FLUSH WHERE INDICATED AS PER DWG.

③

EL 12-10-22

120

\*120\*

QC

Quality Control

QC9- Inspect visual per QSI004- Fusion Welds 0.00

Memo 0.00

③

12-10-22

D4410-09

130

\*130\*

QC

Quality Control

QC5- Inspect part completeness to step on W/O 0.00

Memo 0.00

Smb  
12-10-22

3



Work Order ID 91379

October-05-12 11:32:10 AM

\*91379\*

Page 2

Item ID: D4410-041  
 Revision ID:  
 Item Name: Co-Pilot Collective Head Assembly (205)  
 Start Date: 10/05/12 Start Qty: 10.00  
 Required Date: 10/12/12 Req'd Qty: 10.00  
 Reference:

Accept

\*N9000040100\*

Setup Start \*NS1\*  
 Stop \*NS2\*

Cust Item ID:  
 Customer:

Approvals: Process Plan:  
 QC:

Date:  
 Date:

Tooling:  
 SPC (Y/N):

Date:  
 Date:

Run Start \*NR1\*  
 Stop \*NR2\*

Sequence ID/  
 Work Center ID

Operation  
 Description

Set Up/  
 Run Hours

Tool ID Tool # Plan Accept Reject Reject Insp.  
 Code Qty Qty Number Stamp

170

Outsource process-Anodize per QSI017 4.1.10.1

0.00

\*170\*

Outsource4

Outsource process - Anodize

Memo

Issue P/O: 10206  
 Black Anodize as per Dwg D4410

0.00

02/21/022 ②3

180

Receive & Inspect for Damage & Mat'l Certs

0.00

\*180\*

Packaging

Memo

0.00

Packaging

02/21/022 ②3

190

QC3- Inspect Part Finish

0.00

\*190\*

QC

0.00

Quality Control

Memo

5m/s  
 12/10/24

DA  
 12/10/25

3  
 PTD





NCR: Yes / No

## WORK ORDER NON-CONFORMANCE / UPDATE

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: <u>91379</u> Part No. <u>D4410-041</u> NCR No. _____				<b>DISPOSITION</b> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b> <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input type="checkbox"/> Setup <input type="checkbox"/> Other <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>	12/10/25	190	3	upon inspection <del>it</del> it was discovered that D4410-041 is in fact a D4410-043 close for 3 + pull on w/o #91376 D4410-043							

FAULT CATEGORY			
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other





# Work Order ID 91379

October-05-12 11:32:10 AM

\*91379\*

Page 3

Item ID: D4410-041

Revision ID:

Item Name: Co-Pilot Collective Head Assembly (205)

Start Date: 10/05/12 Start Qty: 10.00

Required Date: 10/12/12 Req'd Qty: 10.00

Reference:

Accept

\*N900040100\*

Setup Start \*NS1\*

Stop \*NS2\*

Cust Item ID:

Customer:

Approvals: Process Plan:

QC:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start \*NR1\*

Stop \*NR2\*

Sequence ID/  
Work Center ID

200

\*200\*

Small Fab

Small Fab

Operation  
Description

Set Up/  
Run Hours

0.00

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Memo

ASSEMBLE AS PER DWG.  
RE-PASS HELICOIL TAP IN THREADS

A/R: PROSEAL 890 OR EQUIVALENT

BATCH #: \_\_\_\_\_

0.00

N  
A

See w/o 91376-1

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

210

\*210\*

QC

Quality Control

220

\*220\*

Packaging

Packaging

Identify as per dwg & Stock Location: \_\_\_\_\_

0.00

Memo

0.00





# Work Order ID 91379

October-05-12 11:32:10 AM

**\*91379\***

Page 4

Item ID: D4410-041

Revision ID:

Item Name: Co-Pilot Collective Head Assembly (205)

Start Date: 10/05/12 Start Qty: 10.00

Required Date: 10/12/12 Req'd Qty: 10.00

Reference:

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Stop **\*NS2\***

Cust Item ID:

Customer:

Approvals:

Process Plan:

QC:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/  
Work Center ID

230

**\*230\***

QC

Quality Control

Operation  
Description

QC21- Final Inspection - Work Order Release

Memo

Set Up/  
Run Hours

0.00

0.00

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp

*close for  
3 - to pull on  
w/ C.  
D4410-043  
#91376*

*mr  
12-10-29*



## Picklist Print

October-05-12 11:32:09 AM

Page 1

Work Order ID: 91379

Parent Item: D4410-041

Parent Item Name: Co-Pilot Collective Head Assembly (205)

**Start Date:** 10/05/12

Required Date: 10/12/12

Start Qty: 10.00

Required Qty: 10.00

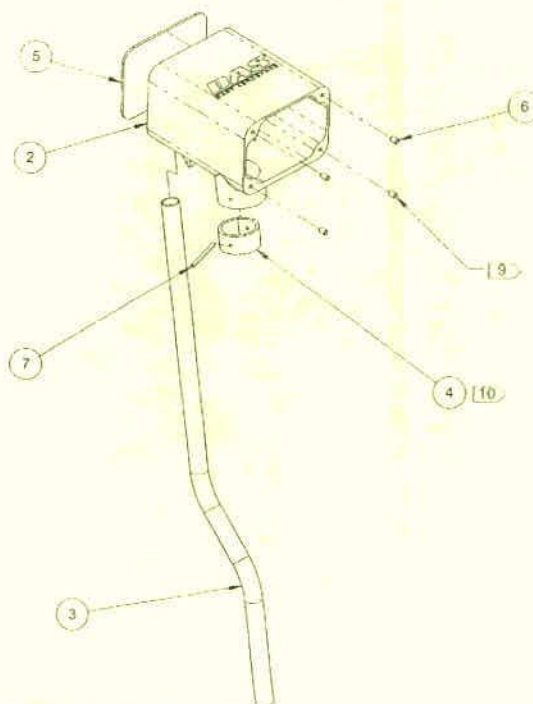
Comments: IPP REV:A NEW ISSUE 11-11-02 JLM VERIFIED BY:DD  
12/08/10 JFS VERIFIED BY:JLM IPP REV:B AS PER REV PB6  
BY:DD IPP REV:C AS PER REV PB10 12/09/20 JFS VERIFIED

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4410-1 Co-Pilot Collective Head		Manufactured	No			110	Each	0.0000	1	10			
D4410-7 Conduit		Manufactured	No		B 91385 x 3	110	Each	0.0000	1	10		12-10-22	
D4410-11 Shim (205)		Manufactured	No		91386 x 3	200	Each	1.0000	1	10		12-10-22	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST	91380	1				3			
					90610	1							
D4410-15 Rear Cover		Manufactured	No			110	Each	1.0000	1	10		12-10-22	
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				S	90611	1							
						1							
0296A108 eli-Coil Insert		Purchased	No			200	Each	23.0000	4	40			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				cnc		23							
					120940	3							
					123120	20							
S171539 n.		Purchased	No			110	Each	27.0000	1	10			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST331		27							
					123183	27							





ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION
1	X	D4410-041	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)
2	1	D4410-1	CO-PILOT COLLECTIVE HEAD
3	1	D4410-7	CONDUIT
4	1	D4410-11	205 SHIM
5	1	D4410-15	REAR COVER
6	4	90296A108	HELI-COIL INSERT (6-32 X 0.276)
7	1	MS171539	PIN



**D4410-041 CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)**

**NOTES:**

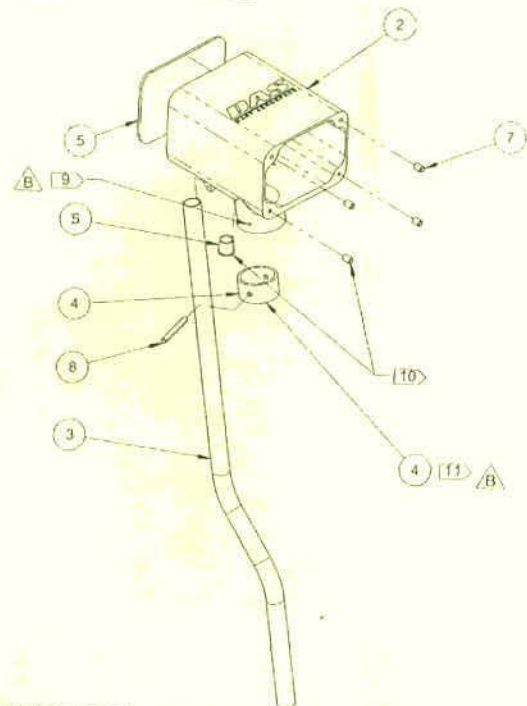
- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 013 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 3.010 MAX.
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6-1
- 7) WEIGHT: 1.55 lbs
- 8) WELD PER DART CSI 004
- 9) INSTALL AFTER ANODIZING
- 10) INSTALL AFTER ANODIZING WET WITH PROSEAL 890 OR EQUIVALENT ENSURE THAT PROSEAL DOES NOT CONTACT PIN

REV	ADD C-BORE, ZN A4-2. ENLARGE HOLES, ZN C5-3 & B8-3. UPDATE LOGO. ADD -043/11/13-15. ROTATE HOLE, ZN C3-2. INCREASE -7 DIAMETER, ZN C1-6. REMOVE -9 FROM -041 ASSEMBLY, ZN C5-1	DC	12.07.30
A	NEW ISSUE	DC	11.04.06
DESIGN	PC	BY	DATE
DRAWN	PC	DART AEROSPACE USA, INC. KENT, WA	
CHECKED	PC	DRAWING NO.	REV. B
MFG. APPR.	PC	D4410	SHEET 1 OF 12
APPROVED	PC	TITLE	SCALE
DE APPR.	PC	CO-PILOT COLLECTIVE HEAD	NTS
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ITEM NO.	QTY. -043	PART NUMBER	DESCRIPTION
1	X	D4410-043	CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)
2	1	D4410-1	CO-PILOT COLLECTIVE HEAD
3	1	D4410-7	CONDUIT
4	1	D4410-13	212 SHIM
5	1	D4410-15	REAR COVER
6	1	D4413-1	DOME PLUG
7	4	90296A108	HELI-COIL INSERT (6-32 X 0.276)
8	1	MS171599	PIN



# NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.55 lbs
- 8) WELD PER DART QSI 004
- 9) REAM TO Ø0.177 (DRILL #16)
- 10) INSTALL AFTER ANODIZING
- 11) INSTALL AFTER ANODIZING WET WITH PROSEAL 890 OR EQUIVALENT ENSURE THAT PROSEAL DOES NOT CONTACT PIN

**D4410-043 CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)**

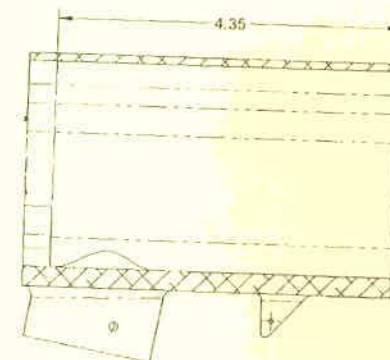
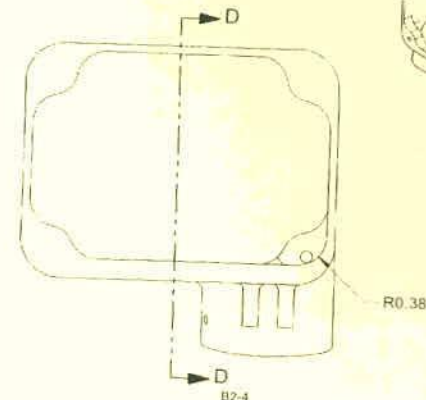
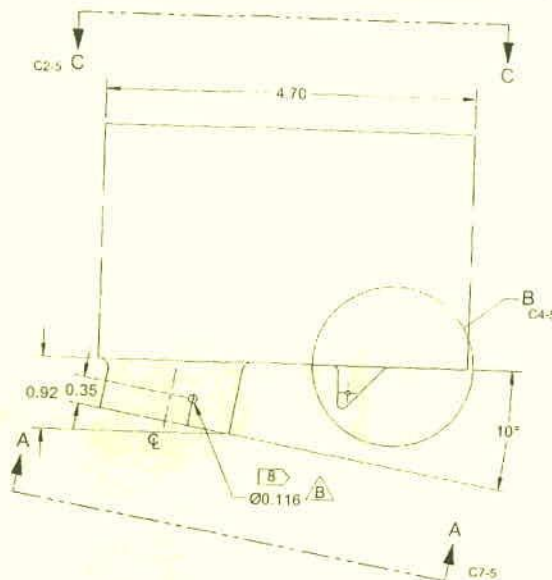
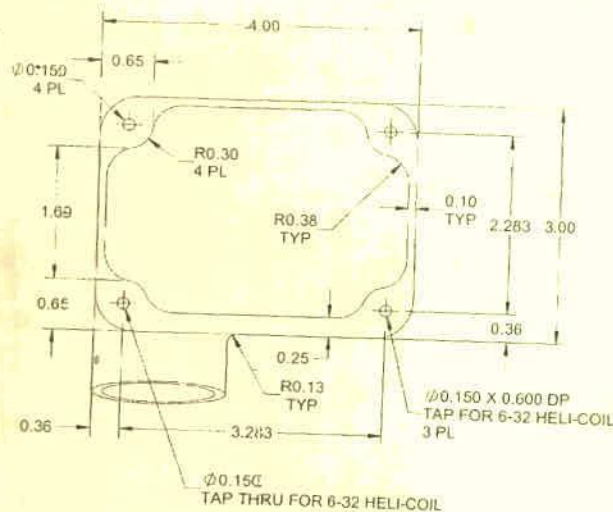
DESIGN	DC	<b>DART AEROSPACE USA, INC.</b> KENT, WA	
DRAWN	DC		
CHECKED	ES	DRAWING NO.	REV. B
MFG. APPR.	2/1	D4410	SHEET 2 OF 12
APPROVED	1/1	TITLE	SCALE
DE APPR.	1/1	CO-PILOT COLLECTIVE HEAD	NTS
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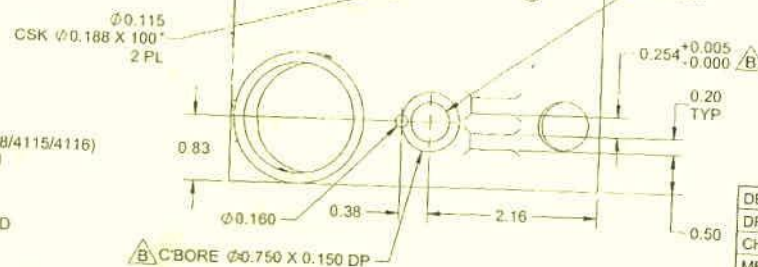


# SECTION D-D

D2-4

## NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR  
QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)  
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)  
OR ASTM B211 OR ASTM B221  
REF. DART SPEC. M6061T6B4.000X3.000
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.24 lbs
- 8) HOLE IS ROTATED 20° COUNTER-CLOCKWISE WHEN VIEWED FROM ABOVE



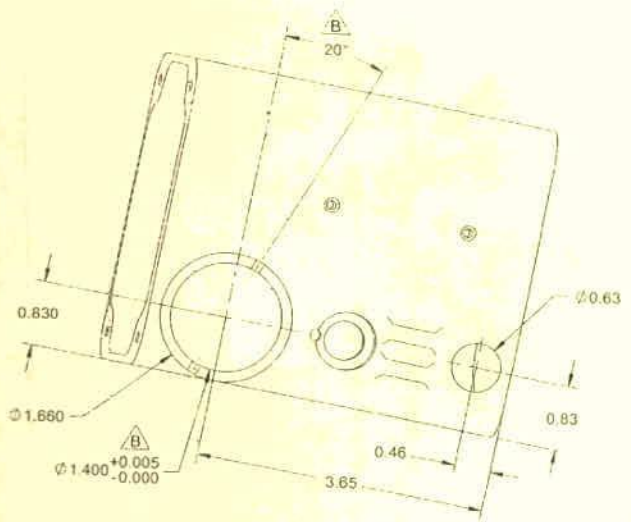
## D4410-1 CO-PILOT COLLECTIVE HEAD

DESIGN	DL	DART AEROSPACE USA, INC.	
DRAWN	DL	KENT, WA	
CHECKED	DL	DRAWING NO.	REV. 4
MFG. APPR.	DL	D4410	SHEET 4 OF 12
APPROVED	DL	TITLE	SCALE
DE APPR.	DL	CO-PILOT COLLECTIVE HEAD NTS	
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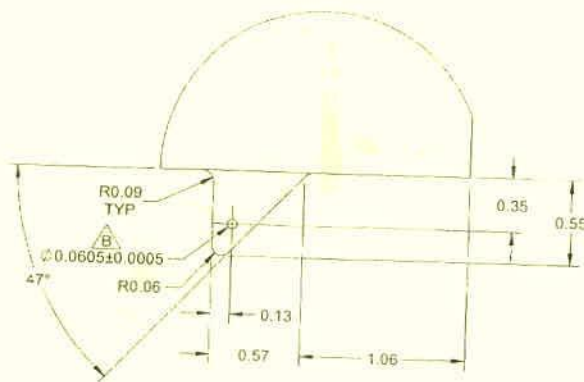


91379



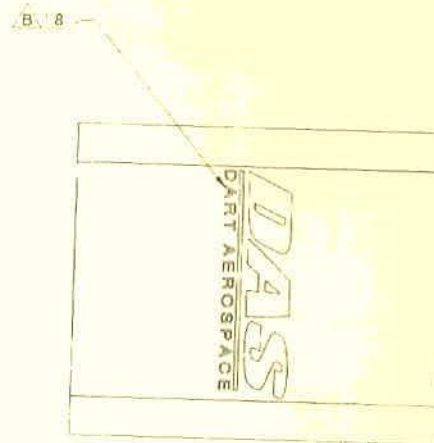
VIEW A-A

C5-4



DETAIL B

C4-4



VIEW C-C

D4-4

D4410-1 CO-PILOT COLLECTIVE HEAD  
DETAIL VIEWS

RELEASED  
2012-09-28

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) ENGRAVE "DAS" LOGO AS SHOWN 0 C03 - 0.005 DP.

DESIGN	DL	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	DL		
CHECKED	DL	DRAWING NO.	REV. B
MFG. APPR.	DL	D4410	SHEET 5 OF 12
APPROVED	DL	TITLE	SCALE
DE APPR.	DL	CO-PILOT COLLECTIVE HEAD	NTS
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2012-09-28

REF. DART SPEC. M6061T6S-D40

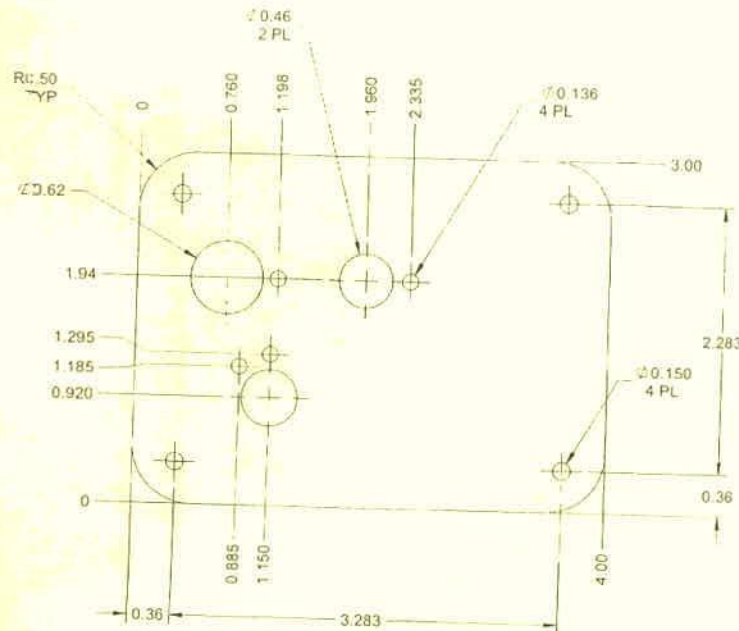
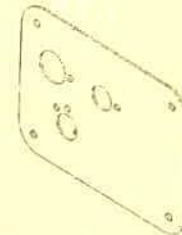
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 0446.1
- 7) WEIGHT: 0.04 lbs

DESIGN	JC	DART AEROSPACE USA, INC.	
DRAWN	JC	KENT, WA	
CHECKED	JE	DRAWING NO.	REV. B
MFG. APPR.	JA	D4410	SHEET 6 OF 12
APPROVED	MA	TITLE	SCALE
DE APPR.	JA	CO-PILOT COLLECTIVE HEAD	NITS
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91379



D4410-5 FACE PLATE

RELEASED  
2012-09-28

NOTES:

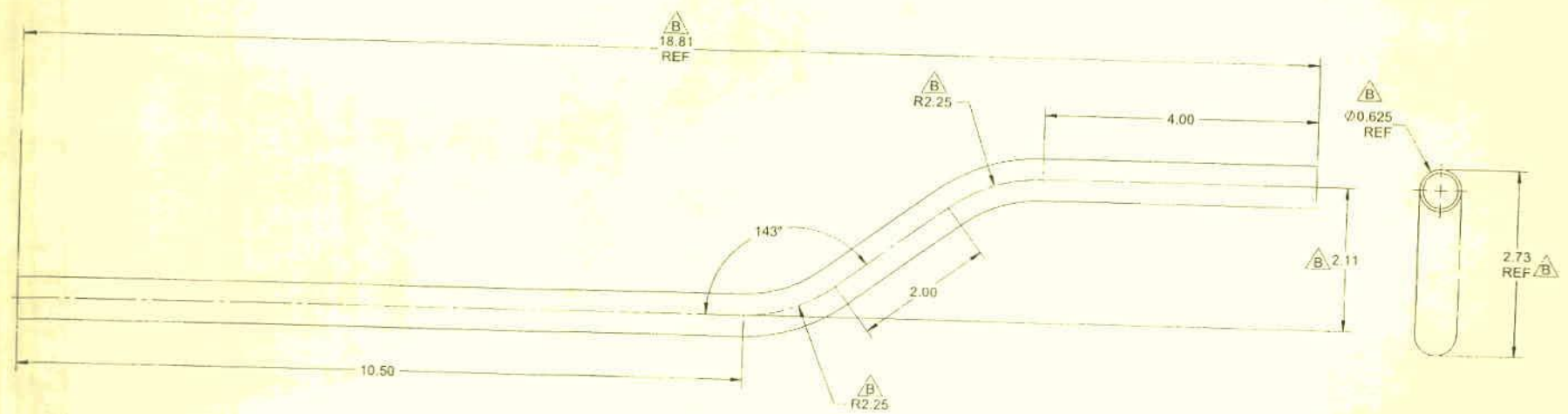
- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.040 THK  
QQ-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR AMS 4027  
OR ASTM B209  
REF. DART SPEC. M6061T6S.040
- 2) FINISH: ANODIZE BLACK PER M.L.A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 048 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.04 lbs

DESIGN	DC	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	DC		
CHECKED	SC	DRAWING NO.	REV. B
MFG. APPR.	SC	D4410	SHEET 7 OF 12
APPROVED	MD	TITLE	SCALE
DE APPR.	HA	CO-PILOT COLLECTIVE HEAD	NTS
DATE	12.07.30	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND CONFIDENTIAL RIGHTS SUPPLIED BY THE SUPPLIER'S CONFIDENTIALITY OF A PART TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	





91379



D4410-7 CONDUIT

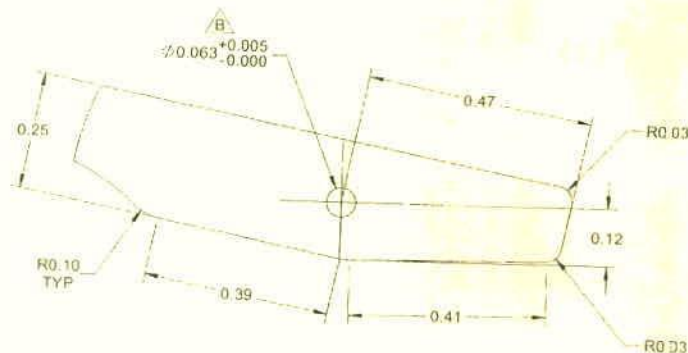
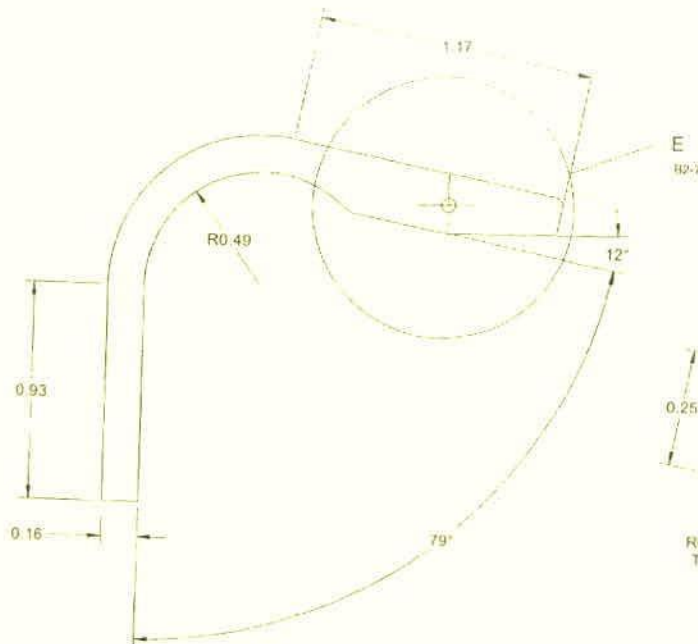
RELEASE  
2012-09-20  
wmp

- NOTES:
- 1) MATERIAL: 6061-T6 OR 6061-T32 ALUMINUM TUBING PER WW-T-700/6 OR AMS 4080 OR AMS 4082 OR QQ-A-200/8 OR QQ-A-227/8 REF DART SPEC. M6061T60325W.050 (B)
  - 2) FINISH: NONE
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: IDENTIFY PER QSI 0446.1
  - 7) WEIGHT: 0.17 lbs

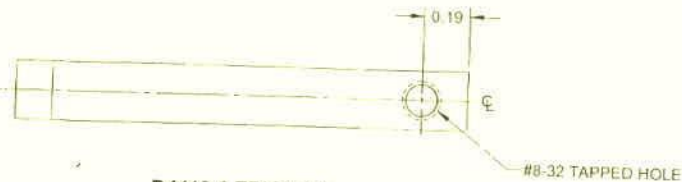
DESIGN	BC	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	BC		
CHECKED	BC	DRAWING NO.	REV. B
MFG. APPR.	BC	D4410	SHEET 8 OF 12
APPROVED	BC	TITLE	SCALE
DE APPR.	BC	CO-PILOT COLLECTIVE HEAD	NTS
DATE	12.07.30	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRELIMINARY AND NOT FOR CONSTRUCTION. IT IS THE PROPERTY OF DART AEROSPACE USA, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION FROM DART AEROSPACE USA, INC.	



B  
0.250<sup>+0.000</sup>  
REF -0.005



DETAIL E  
D4-7



D4410-9 TRIGGER

NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.250 THK  
QQ-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR AMS 4027  
OR ASTM B209  
REF. DART SPEC. M6061T6S.250
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625, TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 & 1
- 7) WEIGHT: 0.01 lbs

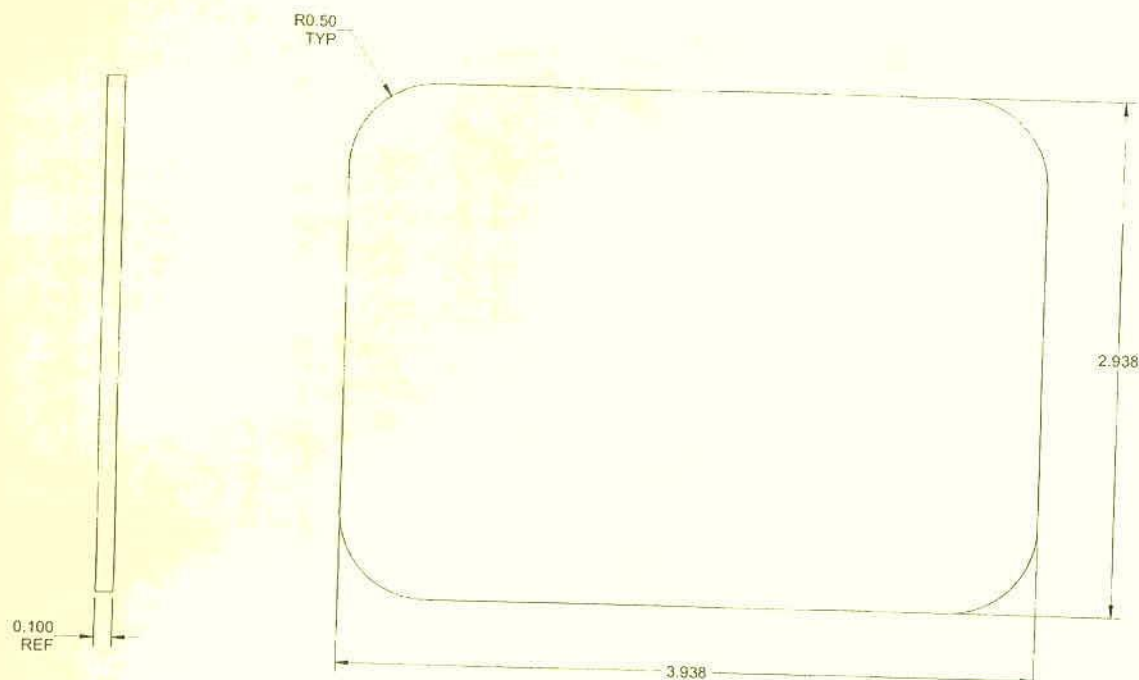
DESIGN	BC	DART AEROSPACE USA, INC.	
DRAWN	BC	KENT, WA	
CHECKED	BC	DRAWING NO.	REV. B
MFG. APPR.	BC	D4410	SHEET 9 OF 12
APPROVED	BC	TITLE	SCALE
DE APPR.	BC	CO-PILOT COLLECTIVE HEAD	NTS
DATE	12.07.30	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC.	

RELEASED  
2012-09-23  
AND





91379



**D4410-15 REAR COVER**

**NOTES:**

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.100 THK  
QQ-A-250/11 OR AMS-QQ-A-250/11  
OR AMS 4025 OR AMS 4027  
OR ASTM B209  
REF. DART SPEC. M6061T6S.100
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.11 lbs

DESIGN	DC	<b>DART AEROSPACE USA, INC.</b> KENT, WA	
DRAWN	DC		
CHECKED	JS	DRAWING NO.	REV. B
MFG. APPR.	SA	D4410	SHEET 12 OF 12
APPROVED	MP	TITLE	SCALE
DE APPR.	TH	CO-PILOT COLLECTIVE HEAD	NTS
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A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada  
Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 61997

Date: 23-Oct-12

#### To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

#### Ship To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
1 lot	Part: ASST Rev:  3 PCS D4410-041 1 PC D4410-043 4 PCS D4410-13 10 PCS D4410-11 12 PCS D4410-9  BLACK ANODIZE MIL-A-8625 TYPE 2 CLASS 2 Job: 20120643	PO: PO18206	Line:
<p align="center">Certificate of Conformance</p> <p>A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.</p> <p align="center">ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY</p> <p>DATE : <u>23/10/12</u></p> <p>CERTIFIED SIGNATURE : _____</p> <p>RECEIVER SIGNATURE : _____</p>			





NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input type="checkbox"/> Setup <input type="checkbox"/> Other <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>				<i>See NCR Attachments</i>  <i>5/21/25</i>							
<b>FAULT CATEGORY</b>											
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled  <input type="checkbox"/> Other		





# Work Order NCR

Printed on: Thursday, October 25, 2012

Details			
<b>Raised Date</b> 10/25/2012	<b>Status</b> Open	<b>Owner</b> El Kassis, Isam	<b>Number</b> NCR12-1967
<b>Target Date</b> 11/10/2012	<b>Standard</b>	<b>Severity</b> MAJOR	
<b>Source</b> Work Order NCR		<b>Audit</b>	
<b>Raised By Person</b> Downing, Eric	<b>Raised Against (Department or Supplier)</b> Manufacturing\Large Fab		<b>Fault Category</b> General\Misread
<b>Details</b> found at assembly that the welded / anodized parts were not correct. they were miked up at welding. QTY x 4 D4410-1 collective bell heads had the 0.116" hole reamed to 0.171" for the D4410-043. QTY x 1 was used for the correct assembly D4410-043 but QTY x3 were used for the incorrect assembly D4410-041. the D4410-041 calls for a D4410-1 with a 0.116" hole.pats were inspected incorrectly and passed on to have anodizing completed			
<b>Product</b>			
<b>Document</b>		<b>Root Cause</b>	
<b>Closed By</b>	<b>Closed Date</b>	<b>Resolution</b>	

Corrective Action			
<b>Target Date</b> 11/9/2012	<b>Owner</b> El Kassis, Isam	<b>Closed Date</b>	<b>Closed By</b>
<b>Details</b>			

Actions			
<b>Number</b>	<b>Owner</b>	<b>Target Date</b>	<b>Completed Date</b>
<b>Details</b>		<b>Response</b>	
1	Lacelle, Linda	10/26/2012	
pull all D4410-041 that were made on w/o 91379-1 and all stock and apply to w/o 91376-1 and cancale the spit work odrers			
2	Petsche, Mike	11/9/2012	
open par to prevent this from happening again i e create different part number for the D4410- 17 (that has 0.171" hole)			





## Verification & Review

Target Date 10/29/2012	Owner	Closed Date	Closed By
Details			

## Actions

Number	Owner	Target Date	Completed Date
Details		Response	

